



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,655	06/29/2001	Theary Chheang	56719US002	8517

32692 7590 06/05/2003

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 06/05/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/896,655

Applicant(s)

CHHEANG ET AL.

Examiner

Katarzyna Wyrozebski Lee

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 25-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-14, 16-24 and 35 is/are rejected.
- 7) ☐ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) 1-35 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 6
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: With respect to claim 15, the examiner was unable to find in the specification description of scrim, and how the adhesive comprises scrim, wherein the scrim is an electro-conductive filler. In order to avoid 112-enablement rejection, the applicant is requested to point the examiner to part of the office action describing the meaning of scrim, and its use.

Appropriate correction is required.

### *Election/Restrictions*

2. Applicant's election with traverse of Group II, claims 12-24 and 35 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that there is no undue burden on the examiner. This is not found persuasive because of the following explanation.

The examiner upon reviewing the claims of the present invention will agree, upon applicant's request to rejoin claims 25-34 providing that once the application becomes in condition for allowance, all the allowable subject matter will be present in restricted claims. Claim 35, as applicant correctly pointed out should and will be part of group II. With respect to

claims 1-11, containing limitation of organoclay and polymer, such is considered a different invention, since the properties and the use of hot melt adhesives are different from properties and use of electro conductive adhesive. In fact, they do require an entirely different search.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12, 14, 16-19, 23, 24, 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Christian (US 6,060,230).

The prior art of Christian discloses 3-layered article, which contains electro conducting layer (see Abstract). The electro conductive layer exhibits increased adhesion and minimal increase in resistivity (col. 5, lines 59-61) once another layer is applied.

According to the prior art of Christian, the electro-conducting article comprises electro-conductive metal containing colloidal particle, smectite clay particles, polymeric binder that is intercalated in-between the layers of the clay and film forming polymeric binder for binding (claims 1, 18).

Application/Control Number: 09/896,655

Art Unit: 1714

According to claims of the prior art of Christian, conductive particles are utilized in an amount of 10-40 % by volume of the entire layer (cl. 2) and the clay component is utilized in amount of 5-25 % by volume of the entire composition (cl. 3). First polymeric binder or intercalant is utilized in amount of 50-85 %by volume (cl. 4).

Polymers utilized in the prior art of Christian include polyvinyl alcohol, polyethylene oxide, polyacrylates and their derivatives, polystyrenes and its derivatives (cl. 11) and polyesters (cl. 13), wherein polymers made of styrene are hydrophobic and thermoplastic. In addition, per Eastman Kodak website, their product AQ-55D polymer has molecular weight of 15,000.

Smectite clay is selected from kaolin, bentonite, montmorillonite, saponite, hectorite and hydrated magnesium silicate (cl. 9).

In the light of the above disclosure, the prior art of Christian anticipates the requirements of claims rejected above.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Application/Control Number: 09/896,655

Art Unit: 1714

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 13, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christian (US 6,060,230) in view of Hansen (US 5,672,400).

The discussion of the disclosure of the prior art of Christian from paragraph 4 of this office action is incorporated here by reference.

Application/Control Number: 09/896,655

Art Unit: 1714

The difference between the present invention and the disclosure of the prior art of Christian is presence of tackifier and semi-crystalline polymer in electro conductive adhesive as well as the type of the specific polyamide.

With respect to the above difference, the prior art of Hansen discloses composition for electro conductive adhesive. The adhesive of Hansen contains semi-crystalline polymer and tackifier (col. 9, lines 2-3).

According to the examples of the prior art of Hansen (ex. 1, col. 9, lines 64) the polymeric component is polyether-polyamide block copolymer and the tackifier is phenolic.

Use of tackifiers and specific polymers in composition that require adhesive properties vary with the type of the substrates such composition should adhere to. The thermoplastics chosen for electro conductive adhesives have to have sufficient creep resistance, high temperature performance and fracture toughness (col. 2, lines 43-57). Tack, as the name suggests, utilized to provide for proper tack.

In the light of the above disclosure, having read and understood the two prior art documents at hand it would have been obvious to one having ordinary skill in the art to combine the prior of record and thereby arrive at the present invention. One of ordinary skill in the art would know how to modify adhesive property of the composition by changing the polymer and tackifier.

Application/Control Number: 09/896,655

Art Unit: 1714

Page 7

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Katarzyna Wyrozebski Lee*  
KIWL  
June 2, 2003